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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	09/821,182
				Filing Date	March 29, 2001
				First Named Inventor	Daniel R. Shepard
				Art Unit	2824
				Examiner Name	A. Q. Tran
Sheet	1	of	8	Attorney Docket Number	NUP-001RE

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1*	US-2,709,042	05-24-1955		
	A2*	US-3,091,754	05-28-1963		
	A3*	US-3,245,051	04-05-1966	J. Robb	
	A4*	US-3,373,406	03-01-1968	Cannon et al.	
	A5*	US-3,626,389	12-07-1971	Waaben	
	A6*	US-3,721,964	03-20-1973	Barrett et al.	
	A7*	US-3,838,405	09-24-1974	Arnett et al.	
	A8*	US-3,942,071	03-02-1976	Krebs et al.	
	A9*	US-4,010,453	03-01-1977	Lewis	
	A10*	US-4,090,190	05-16-1978	Rostkovsky et al.	
	A11*	US-4,240,151	12-16-1980	Kawagoe et al.	
	A12*	US-4,308,595	12-29-1981	Houghton	
	A13*	US-4,312,046	01-19-1982	Taylor	
	A14*	US-4,322,822	03-30-1982	McPherson	
	A15*	US-4,342,102	07-27-1982	Puar	
	A16*	US-4,385,368	05-24-1983	Principi et al.	
	A17*	US-4,394,752	07-19-1983	Boudon et al.	
	A18*	US-4,404,480	09-13-1983	Ransom et al.	
	A19*	US-4,442,507	04-10-1984	Roesner	

FOREIGN PATENT DOCUMENTS						
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		Country Code ³	Number-Kind Code ⁴ (if known)			
	B1	DE	10111454-A1	09-26-2002	Infineon Technologies Ag	

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	A20*	US-4,479,200	10-23-1984	Sato et al.	
	A21*	US-4,525,921	07-02-1985	Carson et al.	
	A22*	US-4,534,008	08-06-1985	Fuchs et al.	
	A23*	US-4,554,640	11-19-1985	Wong et al.	
	A24*	US-4,561,070	12-24-1985	Armstrong	
	A25*	US-4,646,128	02-24-1987	Carson et al.	
	A26*	US-4,646,266	02-24-1987	Ovshinsky et al.	
	A27*	US-4,710,900	12-01-1987	Higuchi	
	A28*	US-4,721,885	01-26-1988	Brodie	
	A29*	US-4,757,475	07-12-1988	Awaya et al.	
	A30*	US-4,772,886	09-20-1988	Hasegawa et al.	
	A31*	US-4,782,340	11-01-1988	Czubatyj et al.	
	A32*	US-4,800,529	01-24-1989	Ueno et al.	
	A33*	US-4,845,679	07-04-1989	Vu	
	A34*	US-4,884,238	11-28-1989	Lee et al.	
	A35*	US-5,051,865	09-24-1991	Kato et al.	
	A36*	US-5,163,328	11-17-1992	Holland et al.	
	A37*	US-5,203,731	04-20-1993	Zimmerman	
	A38*	US-5,296,716	03-22-1994	Ovshinsky et al.	

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	A39*	US-5,357,471	10-18-1994	Alapat	
	A40*	US-5,397,957	03-14-1995	Zimmerman	
	A41*	US-5,432,729	07-11-1995	Carson et al.	
	A42*	US-5,441,907	08-15-1995	Sung et al.	
	A43*	US-5,463,269	10-31-1995	Zimmerman	
	A44*	US-5,463,583	10-31-1995	Takashina	
	A45*	US-5,569,973	10-29-1996	Zimmerman	
	A46*	US-5,576,986	11-19-1996	Matsuzaki et al.	
	A47*	US-5,640,343	06-17-1997	Gallagher et al.	
	A48*	US-5,668,032	09-16-1997	Holmberg et al.	
	A49*	US-5,675,531	10-07-1997	McClelland et al.	
	A50*	US-5,719,589	02-17-1998	Norman et al.	
	A51*	US-5,835,396	11-10-1998	Zhang	
	A52*	US-5,837,564	11-17-1998	Sandhu et al.	
	A53*	US-5,840,608	11-24-1998	Chang	
	A54*	US-6,055,180	04-25-2000	Gudesen et al.	
	A55*	US-6,075,723	06-13-2000	Naiki et al.	
	A56*	US-6,117,720	09-12-2000	Harshfield	
	A57*	US-6,163,475	12-19-2000	Proebsting	

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	A58*	US-6,185,122	02-06-2001	Johnson et al.	
	A59*	US-6,198,682	03-06-2001	Proebsting	
	A60*	US-6,236,587	05-22-2001	Gudesen et al.	
	A61*	US-6,259,132	07-10-2001	Pio	
	A62*	US-6,351,023	02-26-2002	Gates et al.	
	A63*	US-6,459,095	10-01-2002	Heath et al.	
	A64*	US-6,462,998	10-08-2002	Proebsting	
	A65*	US-6,559,468	05-06-2003	Kuekes et al.	
	A66*	US-6,586,327-A1	07-01-2003	Shepard	
	A67*	US-6,587,394	07-01-2003	Hogan	
	A68*	US-6,598,164	07-22-2003	Shepard	
	A69*	US-6,613,650	09-02-2003	Holmberg	
	A70*	US-6,721,223	04-13-2004	Matsumoto et al.	
	A71*	US-6,744,681	06-01-2004	Hogan	
	A72*	US-6,839,260	01-04-2005	Ishii	
	A73*	US-7,054,219	05-30-2006	Petti et al.	
	A74*	US-7,088,613	08-08-2006	Lue et al.	
	A75*	US-7,149,934-A1	12-12-2006	Shepard	
	A76*	US-7,183,206-A1	02-27-2007	Shepard	

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	A77*	US-7,190,602	03-13-2007	Johnson et al.	
	A78*	US-7,330,369	02-12-2008	Tran	
	A79*	US-7,376,008	05-20-2008	Shepard	
	A80*	US-7,408,798	08-05-2008	Bernstein et al.	
	A81*	US-7,460,384	12-02-2008	Shepard	
	A82*	US-7,471,547	12-30-2008	Schloesser	
	A83*	US-7,548,453	06-16-2009	Nestler	
	A84*	US-7,548,454	06-16-2009	Nestler	
	A85*	US-7,554,873	06-30-2009	Lee et al.	
	A86*	US-7,593,246	09-22-2009	Shepard	
	A87*	US-7,593,256	09-22-2009	Nestler	
	A88*	US-20030026120-A1	02-06-2003	Scheuerlein	
	A89*	US-20030028699	02-06-2003	Holtzman et al.	
	A90*	US-20040145938	07-29-2004	Tihanyi	
	A91*	US-20040160805-A1	08-19-2004	Rinerson et al.	
	A92*	US-20050067675	03-31-2005	Shepard	
	A93*	US-20050127350	06-16-2005	Furkay et al.	
	A94*	US-20060072427	04-06-2006	Kanda et al.	
	A95*	US-20070028150	02-01-2007	Shepard	

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NON PATENT LITERATURE DOCUMENTS			
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	C1	Berger, "Models for Contacts to Planar Devices," Solid-State Electronics, vol. 15 (1972), pp. 145-158.	
	C2	Crawford et al., "An Improved Tunnel Diode Memory System," IBM Journal (July 1963), pp. 199-206.	
	C3	De Graaf et al., "A Novel High-Density Low-Cost Diode Programmable Read only Memory," IEEE IEDM, session 7.6.1 (1996), pp. 189-192.	
	C4	Hodges et al., "Analysis and Design of Digital Integrated Circuits," McGraw-Hill Book Company, pp. 27-32.)	
	C5	Hurst, "A Survey of Published Information on Universal Logic Arrays," Microelectronics and Reliability, vol. 16 (1977), pp. 663-674.	
	C6	International Search Report and Written Opinion in International Patent Application No. PCT/US2007/007792, mailed October 30, 2007.	
	C7	International Search Report and Written Opinion in International Patent Application No. PCT/US07/011020, mailed July 18, 2008 (16 pages).	
	C8	International Search Report and Written Opinion in International Patent Application No. PCT/US2008/075986, mailed January 22, 2009 (13 pages).	
	C9	International Search Report and Written Opinion in International Patent Application No. PCT/US2008/082503, mailed February 25, 2009 (13 pages).	
	C10	McConnell et al., "Diode-Transistor Logic," Digital Electronics, Chapter 5, West Virginia Univ. (2002), pp. 1-14.	

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	C11	Near et al., "Read-only Memory Adds to Calculator's Repertoire," Electronics (February 3, 1969), pp. 70-77.	
	C12	Partial International Search Report in International Patent Application No. PCT/US07/011020, mailed April 14, 2008, 6 pages.	
	C13	"Summary Page: National Radio Institute 832," Old-Computers.com, http://old-computers.com/museum/computer.asp?c=884&st=1 , (April 4, 2007) 2 pages.	
	C14	Wang et al., "High-Current-Density Thin-Film Silicone Diodes Grown at Low Temperature," Applied Phys. Lett., vol. 85(11), pp. 2122-2124 (Sept. 13, 2004).	
	C15	Wang et al., "Low Temperature Thin-Film Silicon Diodes for Consumer Electronics," Mater. Res. Soc. Symp. Proc., vol. 862 (2005), pp. A15.5.1-A15.5.6.	

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